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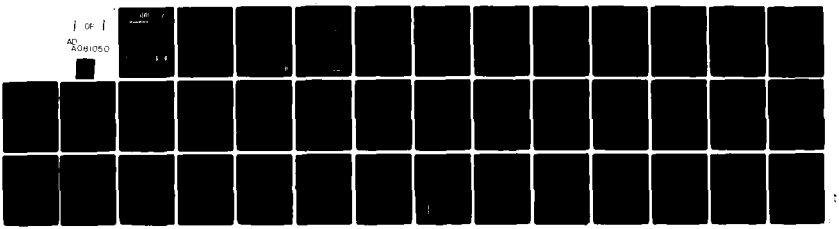

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Human Resources Research Organization
300 North Washington Street
Alexandria, Virginia 22314

LEVEL II

Consulting Report

DETERMINATION AND APPLICATION OF TRAINING OBJECTIVES IN REVISING THE SUPPLYMAN (MOS 76A10) COURSE

by
Harold Wagner, James R. Lodge, A. James McKnight
Richard D. Behringer and Jane V. Lee

August 1970

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This report describes (a) the procedures used to analyze Army Supplyman duties and tasks to derive a set of training objectives, including standards of performance, (b) techniques by which training content was aligned with established course objectives, (c) the interim comparison of Pilot and Army Training Center courses, and (d) the final evaluation of the revised Supplyman course.

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FOREWORD

This research was performed by the Human Resources Research Organization (HumRRO). The study was initiated as technical advisory service and was completed as part of Work Unit STOCK, Development of Training Management Procedures for Different Ability Groups. The research was completed while HumRRO was part of The George Washington University.

This report provides a description of (a) the procedures used to analyze Supplyman duties and tasks to derive a set of training objectives, including standards of performance, (b) techniques by which training content was aligned with established course objectives, (c) the interim comparison of Pilot and Army Training Center courses, and (d) the final evaluation of the revised Supplyman course.

The study was performed under the direction of Dr. A. James McKnight, the Work Unit Leader. The task analysis was supervised by Dr. Harold Wagner, assisted by Mr. James R. Lodge, HumRRO and MSG Harry G. Abel, the Quartermaster School, with the participation of other military and civilian personnel of the Quartermaster School. The computer program was written by Mrs. Bettye Boggs and the processing performed by HumRRO Computer Center personnel. Dr. Richard D. Behringer developed and administered the end-of-course performance tests. The discrepancy analysis was performed by Dr. Wagner. From the results of the discrepancy analysis, SP-5 Donald Quigley revised the task analysis document. Mrs. Jane V. Lee organized and revised the final report.

HumRRO research for the Department of the Army is conducted under Contract DAHC 19-70-C-0012. Training Motivation, and Leadership research is conducted under Army Project 2Q062107A712.

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SUMMARY AND CONCLUSIONS

PROBLEM

In 1966, the Department of Defense instituted Project 100,000, a program which reduced the prevailing mental and physical standards for the armed services to permit the annual induction of an additional 100,000 men each year. This program included a variety of activities intended to facilitate the absorption of these "New Standards" personnel by the services. Redesigning training programs to accommodate New Standards personnel was among these activities.

The U.S. Army Quartermaster School at Fort Lee, Virginia, requested HumRRO assistance in evaluating its revision of the Supplyman (MOS 76A10) course. This training program had been designated as a pilot course to pioneer techniques for dealing with the New Standards input.

OBJECTIVES

The purpose of this study was to evaluate the effectiveness of the revised Supplyman course in accommodating New Standards personnel without a decline in performance standards.

APPROACH

A comprehensive analysis of the Supplyman's duties and tasks was performed in order that appropriate training objectives and performance standards could be specified. A task analysis technique, amenable to computer processing, was developed and provided data on a continuing basis to curriculum developers. In addition, a quality control procedure was instituted for checking course content against the task analysis.

The focus of this effort was the construction of an end-of-course performance measure. Supply tasks were selected for a job sample performance test which was administered to graduates of the pilot course and its conventional counterpart at a U.S. Army Training Center (ATC) for an interim evaluation. The performance test was then modified and administered to graduates of the revised pilot course to evaluate their proficiency in meeting performance standards derived from the task analysis (final evaluation).

RESULTS

The interim evaluation demonstrated the following:

(1) With the exception of non-critical errors and typing, Category II-III personnel scored significantly higher on all tests than Category IV personnel.

(2) The pilot course graduates required more time and committed more critical errors than the AIC graduates on the performance test.

(3) The pilot group required less assistance and committed fewer non-critical errors than the AIC group on the performance test.

(4) The AIC group performed significantly better than the pilot group on tests of reading, arithmetic, and typing.

(5) The pilot group surpassed the AIC group on the supply knowledge test.

(6) There was no attrition or recycling of pilot course students, whereas 10 percent of AIC students were dropped and nearly one quarter of the sample used in this study had been recycled.

The final evaluation of the revised pilot course indicated the following:

(1) On the test as a whole, the class performed over 80 percent of the task elements correctly.

(2) Students did not perform any more reliably on highly critical items (.8 and .9) than they did upon less critical (.5 and .7) items. As a result, they failed to meet performance requirements of the former while exceeding those of the latter.

CONCLUSIONS

The findings of the interim evaluation were of limited value in comparing the pilot course against the AIC course, because of different emphases placed on the curricula, and differences in student samples and test administrations. However, the Project 100,000 goal of accommodating new standards personnel without reducing performance standards was achieved, as evidenced by the reduction in attrition achieved by the pilot group in comparison to that of the AIC program, without significant performance decrement. While each group exceeded the other on certain tests, the balance favored neither group.

Although overall performance was good, the final evaluation indicated that graduates of the revised pilot course failed to attain the standards of performance set for highly critical items. As these standards were arbitrary, it is possible that they were set unrealistically high. It is also possible that insufficient emphasis was placed on the critical areas in the course. Evidence indicates that instructors did not have enough time to use the task analytic information when determining which areas to stress in the course. Overall, however, the revised course developed by the Quartermaster School effectively accommodated New Standards personnel, thus achieving its objective.

Chapter 1

DETERMINATION OF TRAINING OBJECTIVES

INTRODUCTION

In October 1966, the Secretary of Defense instituted a program by which prevailing mental and physical standards for the armed services were reduced to permit the annual induction of an additional 100,000 men each year. Approximately 85% of these "New Standards" inductees would enter under the lowered mental standards and the majority of them -- over 60,000 -- would be assigned to the Army.

Project 100,000, as the program was called, included in addition to the New Standards personnel, a variety of activities intended to facilitate their absorption by the armed services. Among these efforts was the redesign of military training programs to enable them to better accommodate personnel of lowered academic promise. Several Army programs were designated pilot courses to pioneer techniques for dealing with the New Standards input. Among these was the Supplyman (MOS 76A10) course for which the U.S. Army Quartermaster School (QMS) at Fort Lee, Virginia, had proponency.

A request was made by the QMS for the assistance of HumRRO in evaluating the results of the Supplyman course revision. The measure of success was to be the ability of the pilot course to meet the Project 100,000 goal of accommodating New Standards personnel without a decline in the standards of performance. HumRRO participation commenced in May of 1967.

The focus of this HumRRO effort was construction of an end-of-course performance measure to be administered to graduates of the pilot classes. In order to achieve this objective, performance specifications were needed by which to test the students and thus evaluate the revised Supplyman course. A task list had been prepared by the Project 100,000 group at the Quartermaster School. This list served at the basis for the first revision of the Supplyman course. There were, however, deficiencies in the original task list due primarily to the short period of time that QMS had available for its development. It did not identify all of the tasks, nor did it describe in sufficient detail how they would be accomplished. For example, instead of "The Supplyman assists his supervisor," the precise responsibilities of each individual needed to be identified. The task analysis technique to be described was developed to identify all relevant tasks, skills, knowledges and performance standards required of the Supplyman. The results of this analysis were used in a further revision of the pilot course as well as in the construction of an end-of-course performance test.

DEFINITION OF "TASK"

One of the difficulties in the field of task analysis is the lack of agreement regarding definition of the term "task." In the literature "task" definitions range from the highly specific to the all-encompassing. A task has been defined as:

a. "A term which refers to relatively independent things that a man does while in one position." [1]

b. "The specific goal to be achieved given a specific stimulus." [2]

c. "A group of closely related work elements that constitute an integral step in the performance of a given duty." [3]

d. "The specific action taken by an individual in performing his duty. The task has identifiable starting and ending points and results in a measurable product." [4]

e. "A collection of activities that are performed by one person, bounded by two events and describable so that the resulting task description conveys enough information about the task to permit the necessary training decisions to be made." [5]

The HumRRO task analysis of the Supplyman job was focused primarily upon training. Since certain characteristics of a task are important for training purposes, these were selected in describing the behavioral events -- such characteristics as the context in which the activity occurs and the performance components of the activity itself. The definition of "task" underlying the task analysis technique employed in this study was

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[1]Shriver, E.L. *A Theoretical Approach to Forecasting the Training Demands Imposed by New Army Weapon Systems.* Staff Memorandum, HumRRO Division No. 1 (System Operations), Alexandria, Virginia, December 1956.

[2]Barton, H.R., Purvis, R.E., Stuart, J.E., and Mallory, W.K. *A Working Model for Determining System Manning and Related Support Requirements.* Technical Report TDR 65-21, Behavioral Sciences Laboratory, Aerospace Medical Research Laboratories, Air Force Systems Command, Wright-Patterson AFB, Ohio, January 1964 (Contractor: Radio Corporation of America).

[3]Darby, C.L., Brown, W.F., Smith, C.D., and Fightmaster, W.J. *The Development of Job Descriptions for NIKE AJAX Battery Officers.* HumRRO Technical Report 54, April 1959.

[4]CON Reg 350-100-1. *Systems Engineering of Training (Course Design).* Headquarters, USCONARC, Fort Monroe, Virginia, February 1968.

[5]Folley, J.D.,Jr. *Guidelines for Task Analysis.* Technical Report: NAVTRADEVCEN 1218-2, U.S. Naval Training Device Center, Port Washington, New York, June 1964 (Contractor: Applied Science Associates, Inc.).

a combination of definitions d and e:

> Task - The specific action taken by an individual in performing his duty. The task has identifiable starting and ending points and results in a measurable product. The description of the task is directed toward providing information on which training content can be based.

PROCEDURES

To provide course developers with the necessary information for making training content decisions, the task analysis attempted to provide a total task inventory, listing all the possible tasks that a job incumbent may perform. It became apparent early in the study that the Supplyman could be assigned to a great variety of duty positions in many types of units. Continuing the development of a total task inventory would have been impractical because there would not be time to train the Supplyman in all tasks. Therefore, as task lists were compiled they were forwarded to QMS for decisions as to which tasks would be taught in the 76A10 course. If a task was to be taught, it was analyzed; if not, it was deleted from the analysis The final task list thus reflected the training objectives selected by QMS.

Categorization of Supplyman Activities

The activities that individuals with the 76A10 MOS are likely to perform were separated into two broad supply process level categories -- Unit and Organization (U & O), and Support. The latter category was further subdivided into Stock Control and Storage procedures.

A matrix was constructed to categorize the Supplyman's U & O tasks. This matrix consisted of a list of "actions" along one dimension and the "objects" of these actions (supplies) along the other dimension. The actions were (1) receiving requests for supplies, (2) making requests, (3) receiving supplies, (4) issuing supplies, (5) receiving turn-ins, and (6) making turn-ins to higher support activities. These action categories were inclusive enough to describe the majority of tasks which the 76A10 would perform at the U & O level. The objects, i.e., the commodities upon which these actions would be taken included (1) individual clothing, (2) organizational clothing and equipment, (3) non-expendable supplies, (4) repair parts, (5) other expendable supplies, (6) petroleum, oils and lubricants (POL), and (7) rations. This produced a 6 x 7 matrix containing 42 cells.

The matrix was refined through a series of structured interviews with QMS content experts. The primary objectives of these interviews were to determine which tasks delineated by the matrix were actually performed by the Supplyman and what steps were involved in performing each task. During the initial session, those cells were eliminated which either were not U & O supply functions or whose elements did not differ from the other cells within the matrix and could be subsumed under them. Additional

U & O tasks not covered by the matrix were listed separately (e.g., handling of laundry, requesting maintenance, etc.).

The Support level tasks were categorized differently from the U & O tasks. In support units, an individual Supplyman is likely to be responsible for a restricted group of tasks whereas in the U & O supply room it is highly probable that a single individual would perform the majority of the supply tasks. Support level tasks were thus categorized according to duty positions, such as document receiving clerk, stock accounting clerk, etc.

The interview sessions occurred over a period of several weeks during which a content expert, assuming the role of a Supplyman, outlined the steps involved in performing the tasks. This information was recorded and compared with existing doctrine and supply publications. Inconsistencies were resolved through further discussion with QMS personnel.

In this manner, listings of tasks and their components were prepared. As the task analysis progressed a coordination system was set up between HumRRO and QMS in order that decisions regarding the inclusion of tasks in the course would be made available to the task analysts. The procedure enabled the task analysts to interact with the training program developers during the time of curriculum development and to have current information continuously available. Also through this interaction, the analysts provided the training program developers with information necessary for realistic job-oriented training. This method, however, necessitated numerous revisions in the task list. To accommodate these revisions within the allotted timeframe would have been impossible without the aid of a computer. A task analytic technique was developed in which computer processing could be utilized for recording tasks and their components.

Computer Processing

The need for computer assistance in handling the enormous volume of task analytic data that can arise within the military occupational structure can be seen in the recent research and development efforts by the Air Force[1,2] and by the U.S. Naval Personnel Research Activity[3], and in

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[1]Potter, K.W., Tulley, A.T., and Reed, L.E. *Development and application of Computer Software Techniques to Human Factors Task Data Handling Problems.* Technical Report AMRL-TR-66-200, Aerospace Medical Research Laboratories, Wright-Patterson AFB, Ohio, December 1966.

[2]Tulley, A.T. and Meyer, G.R. *Implementation of Computer Software Techniques to Human Factors Task Data Handling Problems.* Technical Report AMRL-TR-67-127, Aerospace Medical Research Laboratories, Wright-Patterson AFB, Ohio, September 1967.

[3]Campbell, G.M. *A Standardized Task Format for Personnel Requirements Information System Methodology (PRISM). Preliminary Report.* Research Memo. SRM 68-17, U.S. Naval Personnel Research Activity, San Diego, California, March 1968.

the work being done on the Military Occupational Information Data Bank under the auspices of the Office of Personnel Operations, Department of the Army.

To prepare the task list for computer processing, recording forms were developed (see Appendix A) from which the information could be prepared for keypunching and eventual storage in the computer. Also, a program was developed with the assistance of the HumRRO Computer Center for computer printing of this information whenever needed.

Recording Forms. The type of information that was recorded on the forms is described in Tables 1 and 2. Recording Form-Card 1 contained columns for an identifying number, task or task component statement, and a project designator code. The identifying number reflected the hierarchical level of the task description. The first digit indicated the supply process level (U & O, Stock Control or Storage). The second and third digits indicated the activity or duty, and the major task. For example, at the U & O level, the duty could be "receiving supplies" and the major task "receiving repair parts." The remaining four digits represented a hierarchical arrangement of task components (i.e., subtasks, elements). The task description section of the form provided a space to record a statement describing the task or task component. Abbreviations were used to permit inclusion of all the information on one punch card.

Table 1

ENTRIES ON TASK ANALYSIS RECORDING FORM - CARD 1

Recording Form Columns	Information Recorded
1-7	Identifying number
1	level of supply (1 = Unit & Organization, 2 = Stock Control, 3 = Storage)
2-3	Task
4-7	Task components
8	Blank
9-70	Task or task component description
71-75	Blank
76-79	Project designator code
80	Card number "1"

Table 2

ENTRIES ON TASK ANALYSIS RECORDING FORM - CARD 2

Recording Form Columns	Information Recorded
1-7	Identifying number
8	Blank
9-20	Doctrine reference
9-10	Reference code
11-20	Page number
21	Blank
22-56	Knowledge description
57	Blank
58	Skill code (1 = perceptual, 2 = motor, 3 = cognitive)
59	Blank
60	Criticality judgment performance standard
61	Blank
62-65	Course location
62-63	Page numbers
64-65	Lesson plan code
66	Blank
67-68	Training objectives (not used in analysis)
69-75	Blank
76-79	Project designator
80	Card number "2"

Task-related information useful for course development and evaluation was entered on Recording Form-Card 2. Following the seven-digit identifying number mentioned above, a field labeled "Reference" was provided.

This entry consisted of a code number that pertained to the specific doctrinal reference for that task and/or component, followed by the page numbers within the document that related to the particular item so that changes in doctrine could be rapidly located.

Following the reference entry, space was allocated for the insertion of a "Knowledge Description." Statements describing the supplementary knowledge necessary to enable the Supplyman to perform the task or component were entered in this space. Abbreviations were used whenever space constraints made it necessary. This was followed by a one-letter code which indicated the category of the enabling skill (perceptual, motor, or cognitive) necessary for task performance. Relating knowledge and skill requirements to specific tasks provides a basis for insuring that each item of the training content is related to some aspect of job performance.

The next field of Recording Form-Card 2 was labeled "Criticality." This term refers to the importance of particular tasks to the supply process. Judgments were made by supply experts regarding the importance to the supply system of errors in the performance of these items. These judgments were later translated into standards of performance necessary for graduation in the 76A10 course. Each component of every task was judged individually. Were standards to have been assigned to a task as a whole, no distinction would have been made among the different errors that can occur in the specific elements that constitute task performance. For example, "Must complete DA Form 3161 with no more than three errors" does not distinguish between an error in typing a Federal Stock Number and an error in typing someone's name, yet the former is far more critical. By assigning standards to individual task elements, performance can be evaluated more realistically and meaningfully. Therefore, with the aid of content specialists from the various branches of the Enlisted Supply Department, standards of performance were assigned to the categories of criticality, as follows:

Category 1 - Errors that would result in no supplies, the wrong supplies, or severe delays in the processing of supplies. The standard of performance necessary for graduation assigned to these items was 90 percent.

Category 2 - Errors that would result in the wrong quantities or minor delays in the processing of supplies. The assigned standard of performance was 80 percent.

Category 3 - Errors that could have an effect on the processing of supplies but would probably be detected and corrected locally. The assigned standard of performance was 70 percent.

Category 4 - Errors that would not have an effect on the processing of supplies and would primarily be due to carelessness. The assigned standard of performance was 50 percent.

Although one cannot make a strong case as to the validity of these standards, since they were arbitrarily determined for use as a frame of reference, they provided a starting point and were capable of revision should the need have arisen.

The "Course Location" section contained entries which reflected the position of each of the tasks and/or components within the lesson plans of the 76A10 course. The first two digits reflected the page number at which instruction began on a specific item and the second two digits, the lesson plan in which the item was being taught.

Task Analysis Document. A task analysis that enters the curriculum development process is subject to frequent revision in response to addition and deletion of tasks and task elements, changes in procedures for performing tasks, modification of performance standards, and decisions that affect any of the information items contained in the analysis. To accommodate frequent revisions rapidly and economically, the task analysis document was prepared with the aid of the HumRRO IBM 360 computer (a sample page is shown in Appendix B). This document presents, in a computer printed format, the information recorded on the forms described above. The identifying numbers of the tasks and task components appear in the left-hand column followed by the task description. The Reference column contains the entries relating doctrine to the task and/or component. Enabling knowledges are described in the next section, followed by Column A which contains the enabling skill category code (perceptual, motor, or cognitive). Column B contains the code referring to standards of performance assigned to task components based upon criticality judgments. The course location entries (page number and lesson plan) related to individual task components are found under the Column C heading. Column D (Training Objectives) was not used in the present study but will be discussed in Chapter 2.

Whereas task analyses have been performed as part of many course development efforts, there has been no provision for matching the analyses and course content systematically as has been attempted in this effort. Quality control procedures have usually been limited to follow-up procedures, such as testing. This study provided an opportunity to bring some elements of quality control within the course development operation by using the task analysis document to determine that items designated as training objectives were in fact taught within the course.

Chapter 2

APPLICATION OF TRAINING OBJECTIVES

Use of the task analysis to control content of the 76A10 course assisted the curriculum developers in arranging the training objectives in a job-related sequence. The curriculum was modified with regard to instructional content and form and sequence of presentation utilizing the functional context concept of course development. Changes in sections of the course, based on the task analysis, resulted in limiting instruction in enabling knowledges and skills to that essential for the Supplyman's job, deleting many hours of instruction in non-essential subjects, increasing the amount of class time devoted to practical exercises, and confining the use of television and films to the introduction of instructional blocks. To insure agreement between the task list and the curriculum, a discrepancy analysis was performed to identify task list elements not covered in the training and training content unrelated to tasks in the list. Such differences were resolved during the final revision of the course, prior to sending it to the training centers.

A functional context (job-oriented) approach was applied to the course in preference to a subject-matter oriented approach, because it would better enable New Standards personnel to learn the material. The purpose of learning new material frequently is unclear to students being trained by a conventional approach, for they must retain knowledge over an extended period before it is applied in the course. The learning of novel, unfamiliar material without a meaningful context can be unstimulating and actually result in poor motivation for learning[1], particularly among marginal students.

FUNCTIONAL CONTEXT TRAINING

Functional context training is a method of sequencing training content in which the intended use of new material is established prior to the introduction of the material itself. Establishing for the student the purpose of new material (i.e., providing a functional context for it) generally enhances learning by creating a clear need for the material thus providing an incentive for learning, and by providing the student with a set of meaningful associations between new material and that which he has learned previously. The following sequences represent applications of the functional context approach to the 76A10 course.

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[1]Shoemaker, Harry A. *The Functional Context Method of Instruction*, HumRRO Professional Paper 35-67, July 1967.

1. Job goal to job procedure. The ultimate goal of the job is introduced before the specific job procedures are taught. An example would be that of providing initially a summary of the role of the Army Supplyman, then introducing material dealing with the specific job procedures in the context of the total job. Thus, U & O supply functions can be, when introduced, related in a meaningful manner to the entire supply system.

2. Practical to theoretical. Instruction begins by showing the student what he is expected to do, and then introducing technical or theoretical content as needed to enable him to do it. An example in the 76A10 course is the instruction in arithmetical operations presented at the point at which the student is involved in their utilization. The instructional material is tied directly to the performance that requires it.

3. Whole to part. In dealing with organizational functions (e.g., duty positions, tasks), instruction begins with the functions of the entire unit and then proceeds to the functional relationships among its components. In the 76A10 course, the duty position (e.g., Unit and Organization) is introduced, the relevant tasks are outlined, and finally instruction in the performance of the components of these tasks is presented. Subtasks are related to tasks, and tasks to duty positions (parts explained in terms of their relation to the whole).

Since the task list ordered activities in terms of their job sequence, its use in preparing training content facilitated application of the functional context approach. Some instructors and technical writers found the phrase "teach within the job situation" communicated the essential characteristics of the functional context approach.

COURSE CONTENT

New instructional content, obtained by means of the task analysis, was incorporated into the curriculum according to an instructional sequence that followed a task orientation rather than subject-matter orientation. This did not preclude using occasional blocks of enabling instruction that were not directly related to a specific task (e.g., a section on arithmetic). However, these blocks were relatively small and integrated with task-oriented instruction.

Working copies of lesson plans, programs of instruction, and similar material were mailed to HumRRO as soon as they were prepared. Comments were returned directly to the individual preparing the materials with a copy sent to Headquarters, Enlisted Supply Department. As tasks, task components, and related information were incorporated by QMS personnel, this information was fed into the HumRRO computer and revised printouts were furnished to QMS. These printouts served as interim updated course control documents.

CURRICULUM REVISIONS

Certain sections of the 76A10 course were added or deleted as a result of the task analysts' work, which was facilitated by close interaction with the curriculum developers. Specific changes in the 76A10 course that occurred as a result of this interaction were as follows:

1. The lecture portion of the course was reduced. This change was based on a directive of the Project 100,000 program itself. Maximum classroom time was given to practical exercises in which the instructor's primary role was to guide students having difficulty. Information necessary to perform the exercises was presented by means of written materials whenever feasible.

2. Only those arithmetical operations actually necessary for the Supplyman's job were taught; a section of this subcourse dealing with fractions was dropped.

3. The use of television and films was confined to the introduction of instructional blocks, its purpose being to acquaint the student with the job environment in which his procedural instruction would be applied.

4. A block of instruction in touch-typing was deleted since this level of proficiency is not required in the Supplyman's job. In its place, familiarity with the use of a typewriter was provided in the context of instruction on the preparation of request forms and other tasks requiring this activity.

5. By adhering closely to the task analysis document, 50 hours of instruction in non-essential subject-matter areas were dropped from the training program. The deleted material included a two-hour block on direct exchange procedures, all instruction on subsistence, POL's and the stock locator system. The section on organizational clothing annexes was dropped from the U & O subcourse because this task is infrequently performed by the Supplyman.

DISCREPANCY ANALYSIS

The discrepancy analysis is a procedure which was introduced to insure congruence of the task analysis and the course curriculum. Although this procedure should be instituted during the curriculum development process prior to course evaluation, the final evaluation in this study preceded the discrepancy analysis. Implementation of the activity was delayed due to requirements to produce an operational course in time to accept the scheduled input of trainees to the pilot class. However, results of the discrepancy analysis were utilized in the final 76A10 course revision.

In the Course Location column of the task analysis document, the page number of the lesson plan dealing with each specific task component was indicated. This provided a means of comparing training content with the task list to identify task elements omitted from training and, equally important, to identify training content which was not related to any task

in the listing. The results of this process were communicated to QMS in a discrepancy analysis document, which also had a form designed to assist QMS personnel in resolving the discrepancies.

The discrepancy analysis document consisted of three parts. Part I of the analysis (Appendix C, page) was a list of those procedures, tasks and task elements that were described in the lesson plans but not included in the task analysis. (In some cases an item may have appeared in the list in a different context, but not have been mentioned in the particular task discussed by the lesson plan.) For reference purposes, each discrepant item was given a code number. Following the description of the item, its course location (page number and lesson plan) was indicated.

Part II (Appendix C, page) was a list of procedures, tasks and task elements that were described in the task analysis but not included in the lesson plans. (In some cases an item may have been covered in the course in a different context but not mentioned in the one described by the task list.) Following the assigned code number and item description, the item's task list identification (location) number was indicated. The item description could refer to one task element or to all the components of a task or procedure.

Part III was a form provided for use by QMS personnel to record their decisions and corrections regarding the discrepant item. It consisted of three sections (Appendix C, pages). The first two sections listed the code numbers of the discrepant items. Spaces were provided to indicate whether the item would be added, deleted, or remain in the course and/or task list. If the item was taught in a different context, there was enough space to enter the relevant page and lesson plan numbers. If the item was incorrectly described, corrected statements could be entered on the pages provided in the third section of the document.

Most of the discrepancies were minor. However, in some instances, the omissions uncovered by this process involved important instructional blocks and affected the end-of-course test results (see Chapter 3). The task analysis document and 76A10 course were revis d to reflect the discrepancy analysis resolutions.

Chapter 3

EVALUATION

The true measure of a training program's effectiveness is the ability of its graduates to perform effectively on the job. While it is rarely feasible to assess actual job performance in the field, a sample of job tasks may be assembled into an end-of-course performance test that closely approximates the primary job requirements. The results will provide a reasonable estimate of job ability provided (a) the sample of tasks is of sufficient size and is sufficiently representative of the job, (b) test conditions realistically approximate the essentials of the job situation, (c) test performance is representative of the graduate's capability (e.g., no cribbing), and (d) administrative procedures do not compromise the fidelity of the test.

INTERIM EVALUATION

While a valid assessment of the revised Supplyman course necessarily awaited the completion of the task analysis, Headquarters, USCONARC, requested an early comparison between the revised Supplyman course and its conventional counterpart as administered at several U.S. Army Training Centers (ATC's). Comparison of attrition rates for the first pilot class and a selected 76A10 course at Fort McClelland, conducted by QMS, clearly favored the former course, whose attrition rate was zero. However, differences in attrition rates can reflect differences in graduation standards as much as they do the quality of instruction. What was required was an assessment of the proficieney of the two groups in order to assure that the reduction in attrition was not achieved at the expense of the trainee's performance capability.

Method

To assess the proficieney of the Supplyman course graduate, a job sample performance test was constructed of supply tasks selected from the duties' description of the Supplyman MOS. The sample consisted of 10 frequently performed supply tasks representing a wide range of difficulty. Test stations were set up in which tasks were re-created as realistically as possible. The test administrators, playing roles of various supply personnel such as customers, suppliers, or supervisors, established the task requirements that the examinees were to fulfill. All necessary materials including forms, catalogues, files, and manuals were provided. The administrator also prompted the examinee when necessary, making a note of the assistance provided.

Underlying the preformance of supply tasks are enabling skills and knowledges, such as knowledge of supply procedures, concepts, and

policies, basic arithmetic, reading, and typing. Tests were constructed to tap each of these underlying variables; the typing test was of the performance variety while the remainder were given in written form.

The conventional Supplyman course given at the U.S. Army Training Center, Fort Ord, California, was selected for comparison purposes because of the availability of HumRRO personnel and facilities at that installation. It was necessary to select graduates from four Fort Ord classes in order to match the distribution of AFQT scores that prevailed in the first QMS Supplyman pilot class. A total of 17 Category IV and 23 Category II-III personnel were tested at each of the two installations.

Results

Mean scores and standard deviations for the performance tests and tests of enabling skills are presented in Table 3. Performance tests were scored in terms of the following four variables:

1. Time - The total time taken to complete the performance test.

2. Critical Errors - The number of errors of a type that would result in serious delays or incorrect supply items being received.

3. Non-Critical Errors - The number of errors of a type that would result in minor delays or incorrect quantities of supply items being received.

4. Assistance - The number of times the examinees had to be prompted. The scores for the arithmetic and supply information tests were the number of test questions answered correctly. The reading level refers to the average grade level equivalent of the reading test score. The typing scores are based on an arbitrary weighting of time and errors. In Table 3 the results are presented separately for the QMS Pilot Class and the Fort Ord AIC group. Within each group, scores are presented for two levels of ability on the Armed Forces Qualification Test (AFQT), Category II and III versus Category IV personnel.

Mental Categories. With the exception of non-critical errors and typing, the Category II-III personnel scored significantly higher on all tests than their Category IV classmates. Apparently the non-critical errors reflected carelessness more than lack of knowledge and were, therefore, less related to intellectual differences. Typing places more emphasis on perceptual-motor skills than on the cognitive ability reflected in the AFQT scores. The differences between Category IV and Category II-III personnel were similar in the QMS course and the AIC courses.

Performance Tests. The pilot group required much more time and committed more critical errors while the AIC group committed more non-critical errors and required greater assistance. This result may be partly due to differences in emphasis between the courses. With its practical orientation, the pilot course provided its students with considerable practice in performing tasks. Consequently, these students

Table 3

RESULTS OF INTERIM COMPARISON

Performance Test	Mean		Standard Deviation	
	Pilot[1]	ATC	Pilot	ATC
Time (min.)				
Category IV[2]	211	179	29.1	24.1
Category II-III	188	163	28.2	21.2
Critical errors				
Category IV	15.6	12.4	6.1	4.5
Category II-III	11.6	10.3	2.1	4.7
Non-critical errors				
Category IV	6.7	16.8	3.6	4.7
Category II-III	4.9	18.3	3.1	6.0
Assistance				
Category IV	16.0	39.4	7.1	8.7
Category II-III	11.6	33.4	6.7	8.3
Enabling Skills				
Arithmetic (no. correct)				
Category IV	16.7	21.8	4.9	2.7
Category II-III	20.4	22.6	3.0	3.5
Typing (no. correct)				
Category IV	7.6	14.4	4.9	9.0
Category II-III	10.3	18.7	5.6	12.6
Reading level (grade)				
Category IV	5.6	6.5	1.7	1.7
Category II-III	8.1	9.9	2.3	1.5
Supply information (no. correct)				
Category IV	5.4	1.7	2.1	1.7
Category II-III	6.5	2.8	2.6	1.6

[1]All differences between the pilot and ATC groups are significant ($P < .05$).

[2]All differences between Category IV and Category II-III groups are significant ($P < .05$) except for non-critical errors and typing.

were somewhat more self-sufficient and less likely to make simple mistakes than their ATC counterparts. The ACT course, because of its emphasis upon the supply system, may have developed in its students a better appreciation for the consequences of error and enabled them to distinguish and avoid critical errors. Also, despite the equivalence of the two groups on the AFQT, the reading level of the ATC group averaged a grade higher. This might also account for the ability of the ACT group to work somewhat faster.

Lest much confidence be placed in the overall results of this preliminary study, two points must be raised immediately. First, since the test administrators differed between the two installations, the procedures by which these tests were administered are likely to have varied despite the use of standard instruction. Observations seem to indicate that the test administrators at Fort Lee were less inclined to record all of the assistance they provided than were the Fort Ord administrators.

The second reservation concerning the overall results arises from the pattern of differences in individual tasks, as shown in Table 4. Only on the assistance variable was there a consistent pattern for the entire test (pilot group higher than ATC group on all tasks). On the remaining scoring variables, the results varied from task to task. The pilot group appears to have excelled on laundry tasks, requesting supplies, and receipt of undocumented supplies. The ATC group, on the other hand, appears to have surpassed the pilot group on normal receipt of supplies. These differences are presumably related to the content and emphasis of instruction. What they point up is that performance on the overall job sample test is determined by the way the sample of tasks is constituted to form a test. While the sample was a fairly representative one, it was composed of only 16 tasks. Some other sample might have yielded slightly different overall results.

Enabling Skills. The ATC group performed significantly better on the tests of reading and arithmetic -- a likely reflection of the skills with which they entered the course rather than those acquired as a part of the course. The ATC group also performed significantly better on the typing test. In this case the difference is clearly due to training. The ATC program provided 51 hours of typing instruction throughout the program whereas typing in the pilot course was a concentrated 25-hour block early in training. The difference in time allotted to typing instruction follows from differences in the training objectives for the two courses. The objective of typing instruction in the pilot course was to provide only sufficient skill to enable the student to prepare supply documents. Touch typing and the typing speed that it developed were not considered to be of sufficient value to the Supplyman in his assignment to warrant the amount of practice that would have been required.

The pilot class surpassed the ATC group by a wide margin on the supply knowledge test. That the test was a difficult one is evidenced by the small number of items correctly answered. The superiority of the pilot class may be traced to the consolidation of relevant supply

Table 4

PERFORMANCE OF PILOT (QMS) AND ATC CLASSES ON INDIVIDUAL SUPPLY TASKS*

Task	Time	Error (Total)	Error (Non-critical)	Error (Critical)	Assists
1. Ammo requests	P[1]	O	P	O	P
2. Record of demand	O	O	O	O	P
3. Title insert	O	A	P	A	P
4. Turn-in	P	*	*	*	P
5. Turn-in	A	P	P	A	P
6. Clothing issue	A	A	P	A	O
7. Clothing issue	O	A	O	A	P
8. Inventory	O	O	**	**	O
9. Laundry roster	O	P	P	P	P
10. Laundry list	A	P	P	P	P
11. Receive supplies	P	A	A	O	P
12. Receive supplies	A	O	A	O	O
13. Receive supplies	A	A	A	O	O
14. Request supplies	P	P	P	O	P
15. Undocumented supplies	P	P	P	O	P
16. Consolidate records	A	O	O	O	O
Total tests	A	P	P	A	P

[1]P = Pilot group scored significantly higher ($p < .05$)
A = ATC group scored significantly higher ($p < .05$)
O = No significant difference
* = No errors committed
** = Errors not scored for criticality

procedures and factual information in a reference text that was furnished to each student. While a reference text was also available to students of the ATC course, it was less complete with respect to supply procedures and was somewhat less readable than was the pilot course text prepared specifically for the lower AFQT Category IV population.

Attrition. The test results reported for the pilot course included all of the students who entered the course since the entry class graduated. However, 10 percent of the students in classes from which the ATC sample was obtained were dropped for academic reasons prior to testing. Had these poorer students been included in the test sample, the performance of the ATC group obviously would have been lowered. In addition to those dropped, almost a quarter of the ATC sample had been recycled at least once. None of the pilot course students had been recycled. It is reasonable to expect that a similar "extra" week or more of training would have improved to some extent the performance of the poorer students in the pilot class.

Summary

The results of the interim evaluation are of questionable significance in comparing the two training programs with respect to the proficiency of their graduates. First of all, the goals of the two programs differed, with accompanying differences in emphasis given aspects of training. Graduates of each program appeared to excel in different aspects of performance and on different tasks. Secondly, the graduates from the pilot course differed from those of the ATC in that the pilot course graduates had never been recycled and represented 100 percent of the students who had entered the course, whereas nearly a quarter of the ATC graduates had been recycled one or more times and 10 percent of the students who had entered the course had been dropped before graduation. A third limitation to comparing the effectiveness of the pilot and ATC courses on the basis of their respective graduates' performance on this test is the apparent discrepancy in recording assistance rendered by the test administrators at the two locations.

A meaningful comparison would require (1) the students of each course to be matched in AFQT scores, to be starting the course for the first time, and either to complete the course without interruption or to be recycled or dropped on the basis of objective, standardized criteria, and (2) strictly standard procedures of test administration.

It should be noted, however, that performance on this test was not the criterion for graduation. The standard for graduation at both locations was based on in-course test scores and instructor judgment. Therefore, the reduction in attrition achieved by the pilot course, as compared to the conventional ATC program, indicates that the pilot course achieved its assigned goal of better accommodating lower Category IV personnel.

FINAL EVALUATION

The comparison of the first pilot class with the AFC group established that the revised Supplyman course was more effective in training lower Category IV personnel. It did not, however, establish that the course could produce a "qualified Supplyman," there being at that time no explicit standards of qualification. True, the student had to "pass" in order to graduate -- but a passing grade represented a product of test scores and instructor judgments and could not be related to a specific level of potential field performance. And without determination of the graduate's ability to perform, there was no way of answering the fundamental question -- Can the lower Category IV new standards inductee make an effective contribution to the military effort as a Supplyman?

Method

Between the first pilot class in July 196' and the third class in February 1968, training objectives and performance standards were generated which represented the best estimate of supply personnel as to what a qualified Supplyman should be able to do. To assess the degree to which objectives and standards were attained, the job sample perform ance test was administered to graduates of the third pilot class in April 1968. The following revisions in the performance test were made to accommodate changes in training objectives that had occurred since the first pilot class: (1) four of the original tasks were deleted as no longer appropriate; (2) two additional stock control tasks were included because of the expansion of responsibilities in this area; and (3) two pairs of tasks from the original test were combined into a single task due to their consolidation in the task analysis. The product of these revisions was a performance test composed of 1' tasks, 10 of which were common to the earlier test. A minor change was also made in administrative procedures. Since the original training objectives of the pilot course permitted the Supplyman considerable assistance by his supervisor, test procedures allowed such assistance to be provided. However the final task analysis had separated the specific responsibilities of the Supplyman and the supervisor in these "assistance" tasks. Therefore, on the final test, the Supplyman was expected to perform all elements of his tasks independently, and his inability to do so was recorded as "failure" -- the same as completing the elements incorrectly. However, to extract maximum information from the test situation, an examinee who was stumped by a particular element was prompted and permitted to continue.

Results

Table 5 shows the average percentage of task elements passed by the third Pilot class in each of the 12 tasks. Results are recorded separately for each level of performance (.5, .', .8, and .91). An asterisk means that no elements of the task in question had performance standards at that level.

Table 5

AVERAGE PERCENTAGE OF TASK ELEMENTS CORRECT
FOR EACH CATEGORY OF PERFORMANCE
STANDARD -- THIRD PILOT CLASS

Task	Performance Standard			
	.50	.70	.80	.90
1. Prepare ammo request (O)[1]	97	89	*[2]	98
2. Prepare repair part request (O)	84	78	76	96
3. Receive and process turn-in (U)	72	88	*	74
4. Process receipt at stock control (S)	78	68	93	90
5. Issue initial clothing (U)	83	88	58	91
6. Prepare inventory count cards (S)	95	*	88	*
7. Prepare laundry roster and statement (U)	95	*	*	95
8. Prepare laundry list (U)	100	*	*	97
9. Receive normal, over- and short-supplies (S)	85	69	76	70
10. Request supplies (O)	86	88	*	94
11. Receive undocumented supplies (S)	72	87	75	*
12. Consolidate clothing and equipment record (U)	49	32	*	42
Total test	83	76	78	85

[1] O = Organization, U = Unit, S = Support
[2] * = No task elements classified at this performance standard

On the test as a whole, the class passed an average of slightly over 80 percent of the task elements. At first glance this looks reasonably good; however, the data in Table 5 show that there was no relation between the examinee's performance and the criticality of the task elements as indicated by the reliability requirements. Students performed no more reliably on the critical .8 and .9 level elements than they did upon the less critical .5 and .7 elements. The consequence of this uniform performance in the face of varying requirements is shown in Table 6. Whereas everyone met the .5 standards on the test (everyone got 50% or more of the .5 task elements in the test correct), only eight percent met the more stringent .9 standards. Only one individual in the entire class met each of the standards. If meeting the performance standards was a requirement for graduation, only this one individual would have graduated.

Several factors were responsible for the failure of graduates to meet the standards in the more critical tasks. First, the standards themselves, which must be treated as provisional, represented only the best estimate of supply personnel as to what a graduate should be able to do. The estimates did not consider what would be needed in terms of student ability and training to achieve the standards. Because there was no trade-off between the needs and the resources required to fulfill them, the standards may have demanded too much of the instructors and the students within the available course time.

A second factor which contributed to poor student performance was the time pressure which prevented full application of the analytic data to the course revision. The discrepancy analysis, described in an earlier chapter, revealed many cases in which task elements or even entire tasks were inadvertently omitted from lesson plans. The effect of these discrepancies is evident in the pattern of performance over the various tasks. The poorest performance occurred on the following tasks: turn-in (Task 3), receiving normal, over- and under-supplies (Task 9), receiving undocumented supplies (Task 11), and consolidating organizational clothing and equipment records (Task 12). The discrepancy analysis disclosed that Task 12 was not covered at all, Task 3 was covered incompletely, and the elements of Tasks 9 and 11 were treated solely in the context of other tasks.

The mere inclusion of a particular task in training content does not assure that performance standards will be attained. The level of performance will depend upon the emphasis given to the task, that is, how much time is devoted to it in conference sessions, whether it is included in practical exercises, and if so, how many times, and the importance the instructor appears to attach to it in front of the class. No data are available by which to estimate the emphasis given to each task. However, it appears that the instructors received the information on standards too late to utilize them fully in preparation and delivery of instruction.

Table 6

PERCENTAGE OF INDIVIDUALS MEETING
EACH CATEGORY OF PERFORMANCE
STANDARD -- THIRD PILOT CLASS

Task	Performance Standard			
	.50	.70	.80	.90
1. Prepare ammo request (O)[1]	100	84	*[2]	96
2. Prepare repair part request (O)	100	68	76	96
3. Receive and process turn-in (U)	96	76	*	04
4. Process receipt at stock control (S)	96	56	72	36
5. Issue initial clothing (U)	96	92	36	48
6. Prepare inventory count cards (S)	96	*	68	*
7. Prepare laundry roster and statement (U)	96	*	*	84
8. Prepare laundry list (U)	100	*	*	92
9. Receive normal, over- and short-supplies (S)	96	08	76	68
10. Request supplies (O)	100	84	*	72
11. Receive undocumented supplies (S)	72	84	24	*
12. Consolidate clothing and equipment record (U)	44	00	*	08
Total test	100	88	52	08

[1] O = Organization, U = Unit, S = Support
[2] * = No task elements classified at this performance standard

The performance of the third pilot class cannot legitimately be compared with that of its predecessor. Not only were the objectives of training and testing different in the two cases, but the students differed markedly in ability. The AFQT score of the third pilot class averaged 39 as opposed to 30 for the first pilot class. Similarly, reading level averaged over a grade higher for the third class.

Summary

Training objectives and performance standards were developed which represented the best estimate of supply experts as to what a Supplyman course graduate should be able to do. A revised job sample performance test was administered to graduates of the third pilot class in April, 1968, to assess the degree to which these objectives were attained.

The class averaged slightly over 80 percent correct of all task elements on the test. However, students performed no more reliably on the more critical items (.8 and .9 level elements) than they did on the .5 and .7 elements. Certain factors appeared to be responsible for graduates failing to meet the standards in the more critical areas. One factor may have been performance standards that were too demanding. As they represented only an estimate of what a graduate should be able to do, the standards should be treated as provisional. Also, the factor of time pressure undoubtedly had an effect on the application of task analytic data to the curriculum. Based upon the results of the discrepancy analysis, it appears that instructors received certain task information rather late and thus were uncertain as to what material was to be emphasized.

APPENDICES

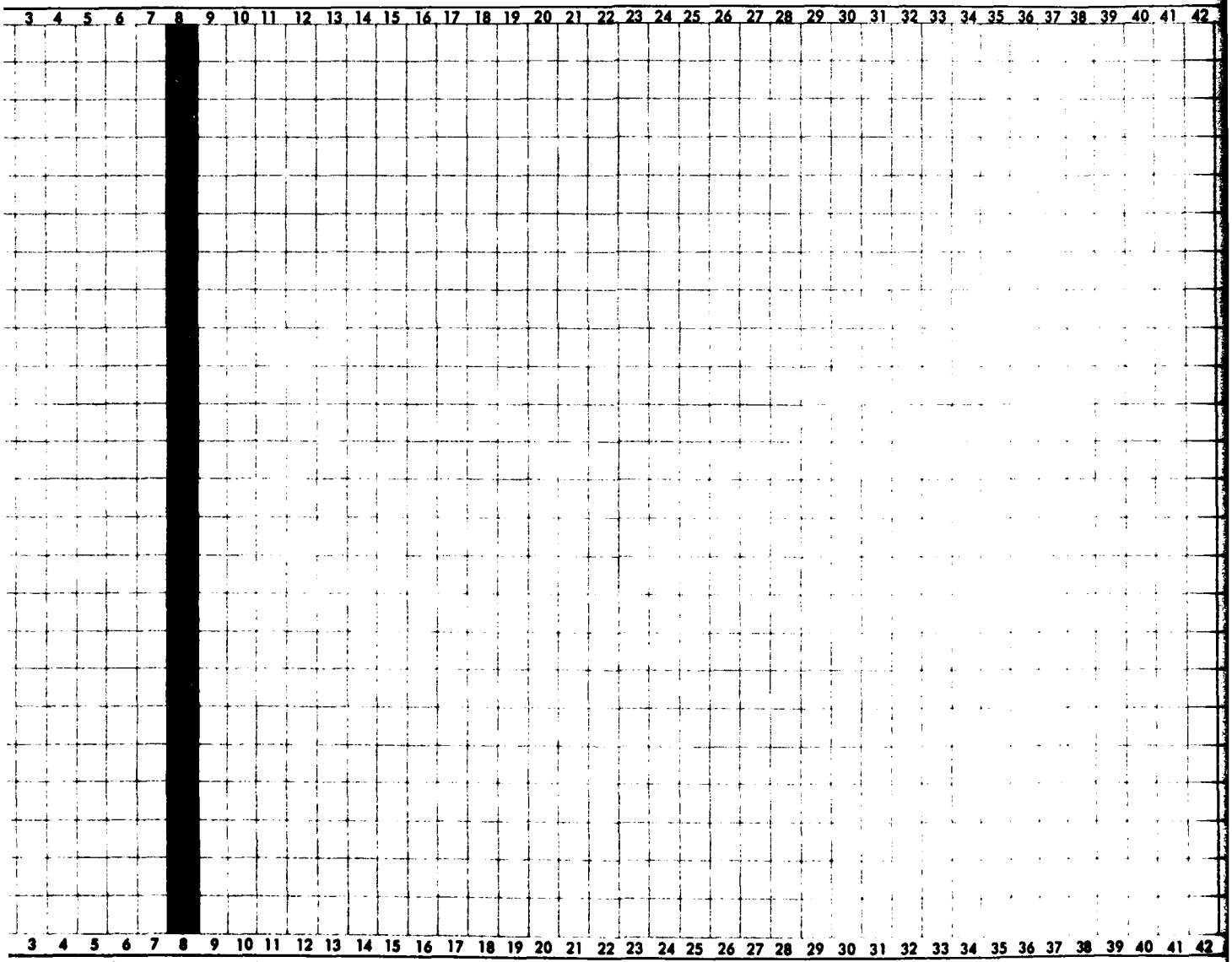
APPENDIX

ing Information:
1 – Duty position (Level)
. 2-3 – Task
. 4-7 – Subtasks or elements

Task Analysis Dat
Recording Form - Co

entifying Information
Cols. 1-7

Task Description
Cols. 9-70



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9-70

Card Deck
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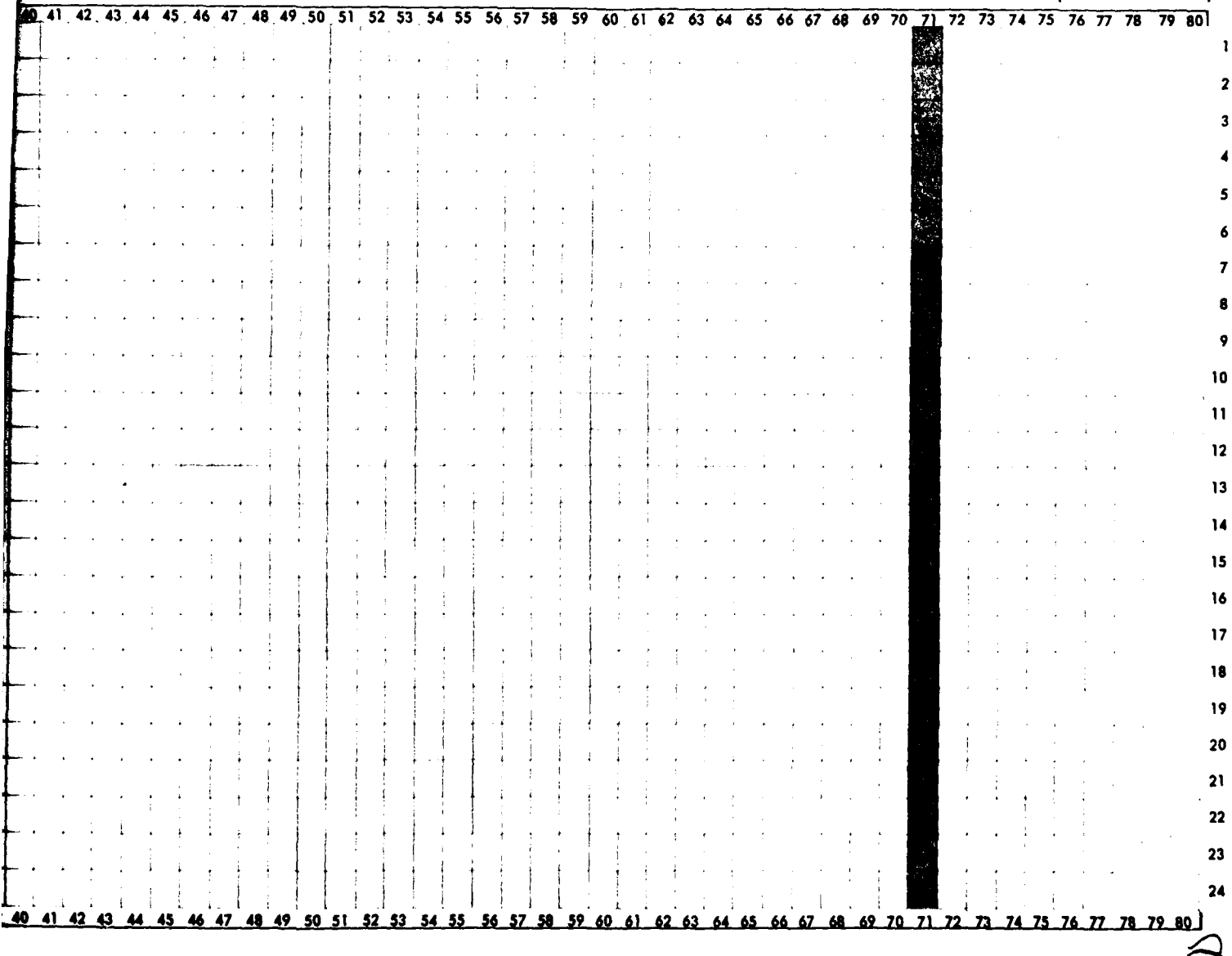

APPENDIX B

SAMPLE PAGE FROM TASK ANALYSIS DOCUMENT

IDENTIFICATION	TASK DESCRIPTION	REFERENCE	KNOWLEDGE DESCRIPTION	A	B	C	D
124000	MAKE REQUESTS FOR REPAIR PARTS	C2 4-1				B6	
1241000	IF AT UNIT SEE 1221000						
1242000	OBTAIN PRE-PUNCHED 2765 FOR RECURRING (INCL PLL) ITEMS	02 4-1	WHICH ITEMS ARE RECURRING & ON PLL	C	4		
1243000	OBTAIN BLANK 2765 IF PRE-PUNCHED 2765 NOT AVAILABLE	02 4-1			4		
1244000	PREPARE BLANK 2765 (TYPE OR PRINT IN INK)	02 4-9	TYPING	B	1	04B6	
1244100	OBTAIN DESCRIPTIVE INFORMATION				3		
1244110	IF NEW ITEM GET FSN UNIT OF ISSUE & DESC FROM TM FOR END ITEM	02 4-9	SELECTION & USE OF PROPER TM	C	1		
1244120	IF REPLACEMENT ITEM OBTAIN INFO FROM AUTHORIZATION DOCUMENT		SELECTION & USE OF AUTHN DOCUMENT	C	3		
1244200	ENTER DESCRIPTIVE INFORMATION	02 4-9			3	14B3	
1244210	ENTER FSN IN BLOCKS 4 5 & 6	02 4-9			3	14B3	
1244220	ENTER UNIT OF ISSUE IN BLOCK 7	02 4-9			1	15B3	
1244230	ENTER END ITEM DESCRIPTION IN BLOCK M	02 4-9			3	13B3	
1244240	ENTER NAME & NO OF PUBLICATION THAT AUTHORIZES ITEMS IN BLK O	02 4-9			3	14B3	
1244250	IF NEW CR NONRECURRING ITEM ENTER N IN BLOCK 13	02 4-9			3	15B3	
1244260	IF REPLACEMENT OF RECURRING ITEM ENTER R IN BLOCK 13	02 4-9			3	15B3	
1244300	ENTER QUANTITY REQUESTED IN BLOCK L	02 4-9			1	13B3	
1244400	OBTAIN PRIORITY INFORMATION	02 4-9			1		
1244410	OBTAIN F/AD FROM SUPERVISOR	02 4-9			3		
1244420	OBTAIN UND & PRIORITY CODE NUMBER FROM REQUESTOR	02 4-9			1		
1244430	CHECK WITH TABLE IN APPENDIX II AR 735-35	02 A2-1	PROCEDURE FOR USING TABLE	C	3		

APPENDIX C
SAMPLE PAGES FROM DISCREPANCY ANALYSIS DOCUMENT

Code	Procedure, Task or Task Component	Course Location Page No./Lesson Plan
1001	Procedure for using AR 700-8400-1 to obtain authorized allowances of individual clothing.**	02/B2
1002	Enter sizes when preparing DA Form 10-195.	04/B2
1003	Check DA Form 10-195 against AR 700-8400-1 when validating requests for individual clothing as initial issue.	06/B2
1004	Enter authorized allowance from AR of item requested which has not as yet been issued on DA Form 10-195.	07/B2
1005	Leave voucher number block blank when preparing DA Form 3078.	07/B2
1006	Leave size and cost columns blank when preparing DA Form 3078.	08/B2
1007	Entries made by personnel at clothing sales store on DA Form 3078.	08/B2
1008	Obtain approval from Supply Sergeant or Supply Officer to prepare DA Form 3078 if request is valid for exchange sale.	12/B2
1009	Prepare DA Form 3078 in two copies for exchange sale.	12/B2
1010	Change the size of the item, if necessary, on DA Form 10-195 after exchange has been completed.	13/B2
1011	If request is for charge sale, refer individual to Supply Sergeant and/or the Unit Commander to determine if a charge sale issue is justified. If their approval is obtained, prepare request.	14/B2
1012	Disposition of DA Form 3078 if charge sale. Retain one copy for suspense file and give three copies to individual to take to clothing sales store.	14/B2
1013	Adjust DA Form 10-195 for charge sale issue. In turn-in column give "administrative credit" and in issue column, "purchase from maintenance allowance".	14/B2
1014	Retain completed charge sale request forms in unit supply files for one year.	15/B2
1015	When charge sale request is posted to DA Form 10-195, annotate the request with the word, "Posted".	15/B2

Code	Procedure, Task or Task Component	Task List Identification Number
2001	When validating a request received for exchange of individual clothing, check if individual has medical authorization for exchange.	1111130
2002	When validating a request received for replacement of individual clothing, check if individual is responsible for the loss or damage, and if not responsible, record an explanation of the situation.	1111310-1111320
2003	Procedure for validating request received for organizational clothing and equipment at unit and at organization.	1120000-1121700
2004	When validating requests received for repair parts, if item is on PLL and in stock, issue item and make request for replacement, and if not in stock make request for the part.	1141200-1141300
2005	Steps to follow when receiving requests for expendable supplies at unit.	1151000-1152000
2006	Steps to follow when receiving requests for expendable supplies at organization if item on hand or if SSSC available.	1153000-1154300
2007	When validating unit request for expendable supplies at organization, deny or return request if it is not valid.	1155300
2008	Procedures for validating requests received for non-expendable supplies at unit and organization.	1160000-1161400
2009	When making a request for a charge or exchange sale of individual clothing, if the request is not authorized, deny it and advise individual to purchase item at own expense.	1211560
2010	When making request for gratuitous issue of individual clothing, type letter for unit CO to sign if required, explaining the request.	1211620

Code	Will continue to be taught and should be included in task list.	Will be dropped from course.	Is incorrect as stated but correction will be taught and should be included in task list. (Indicate corrections on back pages.)
1001			
1002			
1003			
1004			
1005			
1006			
1007			
1008			
1009			
1010			
1011			
1012			
1013			
1014			
1015			
1016			

Code	Will be taught & inserted in lesson plans, or is now taught in another context & will be repeated in this one. Should remain in task list. (If now taught, state page number & lesson plan.)	Will not be taught, is incorrect, or is now taught in another context & will not be repeated in this one. Should be dropped from task list. (If now taught, state page number & lesson plan.)	Is incorrect as stated but correction will be taught & should be included in task list. (Indicate corrections on back pages.)
2001			
2002			
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2004			
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